501933458 05/24/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
David Arthur Berry	12/16/2009
Dan Eric Robertson	12/16/2009
Frank Anthony Skraly	12/16/2009
Brian D. Green	12/16/2009
Christian Perry Ridley	12/16/2009
Sriram Kosuri	12/16/2009
Nikos Basil Reppas	12/16/2009
Martha Sholl	12/16/2009
Noubar Boghos Afeyan	12/16/2009

RECEIVING PARTY DATA

Name:	Joule Biotechnologies	
Street Address:	83 Rogers Street	
City:	Cambridge	
State/Country:	MASSACHUSETTS	
Postal Code:	02142	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13174580

CORRESPONDENCE DATA

Fax Number: (650)938-5200 Phone: 415-875-2405

Email: mnascimento@fenwick.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: Chris Ullsperger
Address Line 1: 801 California Street

Address Line 4: Mountain View, CALIFORNIA 94041

PATENT

REEL: 028267 FRAME: 0747

501933458

ATTORNEY DOCKET NUMBER:	26139-18836 US
NAME OF SUBMITTER:	Chris Ullsperger, Reg. No. 48,006
Total Attachments: 6 source=18836_US_Assignment#page1.tif source=18836_US_Assignment#page2.tif source=18836_US_Assignment#page3.tif source=18836_US_Assignment#page4.tif source=18836_US_Assignment#page5.tif source=18836_US_Assignment#page6.tif	

PATENT REEL: 028267 FRAME: 0748

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to JOULE BIOTECHNOLOGIES a Delaware corporation, having a place of business at 83 Rogers Street, Cambridge, Massachusetts 02142, ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

- 1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional application filed under 35 U.S.C. § 111(b), non-provisional application filed under 35 U.S.C. § 111(a), international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):
 - International Application No. PCT/US2009/035937, entitled ENGINEERED CO2 FIXING MICROORGANISMS PRODUCING CARBON-BASED PRODUCTS OF INTEREST, filed on March 3, 2009, also identified as JBT-102.1 PCT.
 - 2. The entire worldwide right, title, and interest in and to:
- (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION; (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not

1 of 5

Title:

Engineered CO2 Fixing Microorganisms Producing Carbon-Based

Products of Interest

Filed:

March 3, 2009

Application No.:

PCT/US2009/035937

hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

This Assignment is effective at least as of the filing date of the APPLICATION.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Name and Signature	Date of Signature
14 / //	12/6, ,2009
David Arthur Berry	•
Name and Signature	Date of Signature
Jan Eretolet	12-16,2009
Dan Eric Robertson	
Name and Signature	Date of Signature
MARIA	12/16 ,2009
Frank Anthony Skraly	
Name and Signature	Date of Signature
Drian N Green	December 16, 2009
Brian D. Green	
Name and Signature	Date of Signature
Oth Holy	12/16 ,2009
Christian Perry Ridley	·
Name and Signature	Date of Signature
	, 2009
Sriram Kosuri	

Title:

Engineered CO2 Fixing Microorganisms Producing Carbon-Based

Products of Interest

Filed:

March 3, 2009

Application No.:

PCT/US2009/035937

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Name and Signature	Date of Signature
	, 2009
David Arthur Berry	
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	, 2009
Dan Eric Robertson	
Name and Signature	Date of Signature
	, 2009
Frank Anthony Skraly	
Name and Signature	Date of Signature
	, 2009
Brian D. Green	
Name and Signature	Date of Signature
	, 2009
Christian Perry Ridley	
Name and Signature	Date of Signature
graff.	12/16/09,2009
Srinam Kostiri	

2 of 5

USSN 13/174,580 COPY FROM PARENT APPLICATION

Noubar Boghos Afeyan

Title:

Engineered CO2 Fixing Microorganisms Producing Carbon-Based

Products of Interest

March 3, 2009

Filed:
Application No.:

PCT/US2009/035937

USSN 13/174,580 COPY FROM PARENT APPLICATION

Title:

Engineered CO2 Fixing Microorganisms Producing Carbon-Based

Products of Interest

Filed:

March 3, 2009

Application No.:

PCT/US2009/035937

David Arthur Berry and Noubar Boghos Afeyan are employees ("Employees") of Flagship Ventures ("Flagship Ventures") and in that capacity are associated with Joule Biotechnologies, Inc. (the "Company").

In consideration of the mutual promises set forth below and other consideration, the receipt and adequacy of which are hereby acknowledged, the Company, the Employees and Flagship Ventures hereby agree as follows:

- 1. Assigned Patent Rights. The Employees hereby assign all right, title and interest in the aforementioned filing, Docket No. JBT-102.1 PCT. To the extent that the Employees owe any obligations to Flagship Ventures in conflict with the foregoing, Flagship Ventures hereby waives such obligations.
- 2. Miscellaneous. The Employees represent that there will be no conflict between the Employees' performance hereunder and any other obligation the Employees may have (other than to the extent waived by Flagship Ventures above), and further that the Employees are acting in each of their individual capacities hereunder and not on behalf of any other person or any entity. This Agreement is in addition to and not in lieu of any other agreements between the Employees and the Company or Flagship Ventures. The Employees will be acting as an independent contractor hereunder. This Agreement is personal to each of the undersigned Employees and the Employees will not delegate or assign any rights or obligations hereunder; otherwise, this Agreement will be binding upon, and inure to the benefit of, the parties and their respective heirs, successors and assigns. This Agreement will be governed by the laws of the Commonwealth of Massachusetts, without regard to its principles of conflicts of laws.

The Company, the Employees and Flagship Ventures have duly executed this Agreement under seal

EMPLOYEES OF FLAGSHIP VENTURES

Signatory: David Arthur Ber

Signatory: Noubar Boghos Afeyan

Date:

/ / /

USSN 13/174,580

COPY FROM PARENT APPLICATION

Title:

Engineered CO2 Fixing Microorganisms Producing Carbon-Based

Products of Interest

Filed:

March 3, 2009

Application No.:

PCT/US2009/035937

FLAGSHIP VENTURES

Stgnatory: Noubar Boghos Afeyan

Title: CEO

Date:

Joule Brotechnologies

Signatory: William J Sim

Title: CEO

Date:____

5 of 5

26139/15267/DOCS/2103269.2

PATENT

RECORDED: 05/24/2012

Attorney Docket No: 15267 PCT (JBT 102.1 PCT)

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